WEATHER NOTE

ATYPICAL FUNNEL CLOUD IN HAWAII

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"A funnel cloud was observed May 26, 1963 at 1620 HST (May 27, 1963, 0220 GMT) approximately 10 mi. west of Honolulu Airport. Weather observers at the Naval Air Station, Barbers Point, reported the phenomenon just to the north of that station. Weather conditions at the time were: scattered cumulus clouds, a cumulonimbus from which the funnel shaped appendage appeared, and high broken cirrostratus. Bases of the low clouds were recorded at 3000 ft. The vortex extended vertically from the base of the parent cloud and appeared to be increasing in size. However, the vortex extended only halfway from the cloud and then began to dissipate. Complete dissipation was at 1631 HST. The rate and direction of movement was not observed. No reports of damage were received from the public." The foregoing is a report made by the weather observer at WBAS, Honolulu, Hawaii.

The appearance of this particular funnel cloud was of more than passing interest because two papers on funnel clouds in Hawaii had appeared in the previous month in the *Monthly Weather Review*. Both articles described a typical funnel day as being characterized by: (1) weak or diffuse surface pressure gradients, (2) warm, humid afternoons, and (3) afternoon convective cloudiness and showers. Price and Sasaki [1] point out that about two-thirds of the cases they investigated were accompanied by a trough or a closed Low near the area at the 500-mb. level and that the other cases occurred when the contour gradient was flat at that level.

An observer would be hard pressed to describe Honolulu weather on May 26, 1963, as anything but a typically beautiful Hawaiian day. In addition to the report it can be said that trade winds persisted throughout the course of the day and lay in what can be considered a normal range of 10 to 20 m.p.h. The trades were not deep extending only to 6,000 ft. Above that level the synoptic picture was somewhat confused. At 700 mb. a trough extended from Johnston Island northeastward to Hawaii. At 500 mb. a weak ridge lay over the islands of Kauai and Oahu. The 300-mb. chart showed a well defined ridge in the westerlies directly over the island of Kauai. The only aspect of the weather that day not "normal" was the broken cirrostratus and the cumulonimbus. The cumulonimbus may have been better described as swelling cumulus, for although efforts to obtain aircraft top reports were unsuccessful triangulation estimates put the cloud top near the 10,000-ft. level.

Figure 1.—Picture of funnel and parent cloud, taken at Honolulu Airport, 1628 HST, May 26, 1963.

The accompanying picture (fig. 1) was taken from the Honolulu Airport at 1628 HST. It is unfortunate that a picture could not be taken earlier to show the funnel cloud at its greatest length, but this was impossible. Even so the picture may be of some interest because the lack of pronounced vertical extent of the parent cloud is readily apparent.

It may be of further interest to say that the following day the trade winds gave way to land and sea breezes and that that afternoon a funnel cloud was reported near the town of Wahiawa. This cloud occurred under synoptic conditions that are so well described by Price and Sasaki [1].

REFERENCES

1. S. Price and R. I. Sasaki, "Some Tornadoes, Waterspouts, and Other Funnel Clouds of Hawaii," *Monthly Weather Review*, vol. 92, No. 4, Apr. 1963, pp. 175–190.
2. G. A. Peterson, "Funnel Clouds in Hawaii," *Monthly Weather Review*, vol. 92, No. 4, Apr. 1963, pp. 191–192.

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